Complete Summary

GUIDELINE TITLE

ACR Appropriateness Criteria™ for evaluation of left lower quadrant pain.

BIBLIOGRAPHIC SOURCE(S)

Balfe DM, Levine MS, Ralls PW, Bree RL, DiSantis DJ, Glick SN, Megibow AJ, Saini S, Shuman WP, Greene FL, Laine LA, Lillemoe K. Evaluation of left lower quadrant pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun;215(Suppl):167-71. [18 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Left lower quadrant pain

GUIDELINE CATEGORY

Diagnosis

CLINICAL SPECIALTY

Emergency Medicine
Family Practice
Internal Medicine
Radiology
Surgery

INTENDED USERS

Health Plans
Hospitals
Managed Care Organizations
Physicians
Utilization Management

GUIDELINE OBJECTIVE(S)

To evaluate the appropriateness of initial radiologic examinations for patients with left lower quadrant pain

TARGET POPULATION

Patients with left lower quadrant pain

INTERVENTIONS AND PRACTICES CONSIDERED

1. Computed tomography
2. Abdominal plain films
3. Contrast studies
    - Water-soluble contrast enema
    - Single-contrast barium enema
    - Double-contrast barium enema
4. Graded compression sonography
5. Magnetic resonance imaging
6. Nuclear scintigraphy

MAJOR OUTCOMES CONSIDERED

Utility of radiologic examinations in differential diagnosis

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches of recent peer-reviewed medical journals, primarily using the National Library of Medicine´s MEDLINE database. The developer identified and collected the major applicable articles.

NUMBER OF SOURCE DOCUMENTS

The total number of source documents identified as the result of the literature search is not known.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Delphi Method)
Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

One or two topic leaders within a panel assume the responsibility of developing an evidence table for each clinical condition, based on analysis of the current literature. These tables serve as a basis for developing a narrative specific to each clinical condition.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Since data available from existing scientific studies are usually insufficient for meta-analysis, broad-based consensus techniques are needed to reach agreement in the formulation of the Appropriateness Criteria. Serial surveys are conducted by distributing questionnaires to consolidate expert opinions within each panel. These questionnaires are distributed to the participants along with the evidence table and narrative as developed by the topic leader(s). Questionnaires are completed by the participants in their own professional setting without influence of the other members. Voting is conducted using a scoring system from 1-9, indicating the least to the most appropriate imaging examination or therapeutic procedure. The survey results are collected, tabulated in anonymous fashion, and redistributed after each round. A maximum of three rounds is conducted and opinions are unified to the highest degree possible. Eighty (80) percent agreement is considered a consensus. If consensus cannot be reached by this method, the panel is convened and group consensus techniques are utilized. The strengths and weaknesses of each test or procedure are discussed and consensus reached whenever possible.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Criteria developed by the Expert Panels are reviewed by the American College of Radiology (ACR) Committee on Appropriateness Criteria and the Chair of the ACR Board of Chancellors.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

ACR Appropriateness Criteria™

Clinical Condition: Left Lower Quadrant Pain

Variant 1: Older patient with typical clinical presentation for diverticulitis.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Computed tomography	6	
Abdominal plain films	4	
Contrast Studies		
Water-soluble contrast enema	4	
Single-contrast barium enema	4	
Double-contrast barium enema	4	
Graded compression sonography	4	
Magnetic resonance imaging	2	
Nuclear scintigraphy	2	
Appropriateness Criteria Scale		

1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate

Variant 2: Acute, severe, with or without fever.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Computed tomography	8	
Abdominal plain films	7	
Graded compression sonography	6	
Contrast Studies		
Water-soluble contrast enema	4	
Single-contrast barium enema	4	
Double-contrast barium enema	4	
Magnetic resonance imaging	2	
Nuclear scintigraphy	2	
Appropriateness Criteria Scale 1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate		

Variant 3: Chronic, intermittent, or low grade.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Contrast Studies		
Double-contrast barium enema	7	
Single-contrast barium enema	6	
Water-soluble contrast	2	

enema		
Computed tomography	6	
Abdominal plain films	4	
Graded compression sonography	4	
Magnetic resonance imaging	2	
Nuclear scintigraphy	2	
Appropriateness Criteria Scale 1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate		

Variant 4: Woman of childbearing age.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Graded compression sonography	8	
Contrast Studies		
Double-contrast barium enema	7	As with all radiologic procedures, screening for potential pregnancy should be done before these examinations.
Single-contrast barium enema	6	As with all radiologic procedures, screening for potential pregnancy should be done before these examinations.
Water-soluble contrast enema	4	As with all radiologic procedures, screening for potential pregnancy should be done before these examinations.
Computed tomography	6	
Abdominal plain films	4	
Magnetic resonance imaging	4	
Nuclear scintigraphy	2	

Appropriateness Criteria Scale 1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate

Variant 5: Obese patient.

Radiologic Exam Procedure	Appropriateness Rating	Comments
Computed tomography	8	
Contrast Studies		
Single-contrast barium enema	6	
Double-contrast barium enema	6	
Water-soluble contrast enema	4	
Abdominal plain films	4	
Graded compression sonography	4	
Magnetic resonance imaging	2	
Nuclear scintigraphy	2	
Appropriateness Criteria Scale 1 2 3 4 5 6 7 8 9 1=Least appropriate 9=Most appropriate		

Excerpted by the National Guideline Clearinghouse (NGC).

Summary

Abdominal plain films are of limited value in the evaluation of diverticulitis unless complications such as free perforation (pneumoperitoneum) or obstruction are suspected. Nuclear medicine imaging appears to have little role in the evaluation of left lower quadrant pain. The role of magnetic resonance imaging has not been adequately evaluated, but there is no evidence that it is superior to computed tomography or sonography. The two imaging tests most often used for the diagnosis of diverticulitis include the contrast enema and computed tomography.

Recently, graded compression sonography has also been used for the evaluation of these patients.

In summary, there is an increasing trend toward the use of computed tomography as the primary imaging test for the evaluation of acute sigmoid diverticulitis because of its relatively high sensitivity, its ability to determine the presence and extent of disease that might warrant percutaneous catheter drainage or surgery, and its ability to demonstrate extracolonic disease in these patients. Nevertheless, the contrast enema remains a useful adjunctive test for patients with equivocal computed tomography findings. Alternatively, the contrast enema or sonography can be performed as the primary imaging test for suspected diverticulitis, depending on the experience and preferences of the examining radiologist.

CLINICAL ALGORITHM(S)

Algorithms were not developed from criteria guidelines.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The recommendations are based on analysis of the current literature and expert panel consensus.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Selection of appropriate radiologic imaging procedures for evaluation of patients with left lower quadrant pain.

Subgroups Most Likely to Benefit:

Patients with diverticulitis

POTENTIAL HARMS

Although the contrast enema has traditionally been advocated as the primary radiologic test for diverticulitis, some authors believe that this examination should not be performed during the acute episode because of the risk of colonic perforation. Others recommend the use of water-soluble contrast media to avoid contaminating the peritoneal cavity with barium if perforation occurs. However, many studies have shown that single-contrast or even double-contrast barium enemas can be safely performed during the acute episode if there are no clinical signs of perforation.

Subgroups Most Likely to be Harmed:

Patients in an acute episode of diverticulitis or who have clinical signs of perforation.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

An American College of Radiology (ACR) Committee on Appropriateness Criteria and its expert panels have developed criteria for determining appropriate imaging examinations for diagnosis and treatment of specified medical condition(s). These criteria are intended to guide radiologists, radiation oncologists, and referring physicians in making decisions regarding radiologic imaging and treatment. Generally, the complexity and severity of a patient's clinical condition should dictate the selection of appropriate imaging procedures or treatments. Only those exams generally used for evaluation of the patient's condition are ranked. Other imaging studies necessary to evaluate other co-existent diseases or other medical consequences of this condition are not considered in this document. The availability of equipment or personnel may influence the selection of appropriate imaging procedures or treatments. Imaging techniques classified as investigational by the U.S. Food and Drug Administration (FDA) have not been considered in developing these criteria; however, study of new equipment and applications should be encouraged. The ultimate decision regarding the appropriateness of any specific radiologic examination or treatment must be made by the referring physician and radiologist in light of all the circumstances presented in an individual examination.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Balfe DM, Levine MS, Ralls PW, Bree RL, DiSantis DJ, Glick SN, Megibow AJ, Saini S, Shuman WP, Greene FL, Laine LA, Lillemoe K. Evaluation of left lower quadrant pain. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000 Jun;215(Suppl):167-71. [18 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 1999)

GUIDELINE DEVELOPER(S)

American College of Radiology - Medical Specialty Society

SOURCE(S) OF FUNDING

The American College of Radiology (ACR) provided the funding and the resources for these ACR Appropriateness Criteria.™

GUIDELINE COMMITTEE

ACR Appropriateness Criteria™ Committee, Expert Panel on Gastrointestinal Imaging.

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Names of Panel Members: Dennis M. Balfe, MD; Marc S. Levine, MD; Philip W. Ralls, MD; Robert L. Bree, MD; David J. DiSantis, MD; Seth N. Glick, MD; Alec J. Megibow, MD, MPH; Sanjay Saini, MD; William P. Shuman, MD; Frederick Leslie Greene, MD; Loren A. Laine, MD; Keith Lillemoe, MD

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

Please note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

GUIDELINE AVAILABILITY

Electronic copies of the updated guideline: Available from the American College of Radiology (ACR) Web site.

Print copies: Available from ACR, 1891 Preston White Drive, Reston, VA 20191. Telephone: (703) 648-8900.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on March 19, 2001. The information was verified by the guideline developer on March 29, 2001.

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